

REFINEMENT OPTIONS – EVALUATION SUMMARY

	Estimated Capital Cost	Water Quality Annual Pollutant Load (1,000 lbs)		Quality of Life Benefits Associated with Increasing Percentage of Separation			Schedule Level of Certainty for Completion by CD Deadline and Anticipated Level of Construction Disruption
		To Outfall	To Environment	CSO Facilities	Annual Volume of Wastewater Discharge to CSO & Miles to Rivers	West/East CSO Pumping & Treatment Capacity	
Authorized CSO Remedial Plan (July 2001)	\$953 million						
Authorized CSO Remedial Plan ( Pre-Design)	\$989 million	2,347	3,293	6	50 MG & 40 miles	100/60 MGD	High Certainty Completion / Reasonable Disruption
Refinement Option No. 1 (27% Separation)	\$834 million	3,809	4,678	4	36 MG & 34 miles	85/25 MGD	High Certainty Completion / Reasonable Disruption
Refinement Option No. 2 (40% Separation)	\$912 million	4,468	5,119	4	30 MG & 34 miles	100/0 MGD	Reasonable Certainty Completion / Reasonable Disruption
Refinement Option No. 3 (50% Separation)	\$906 million	4,871	5,500	3	25 MG & 32 miles	85/0 MGD	Reasonable Certainty of Completion / Reasonable Disruption
Refinement Option No. 4 (80% Separation)	\$1,264 million	7,668	8,223	2	10 MG & 12 miles	50/0 MGD	Need 3 <sup>rd</sup> Party Review / High Disruption
0% Separation (100% Tunnel / Treatment)	\$829 million	2,347	3,293	6	50 MG & 40 miles	100/60 MGD	High Certainty of Completion / Low Disruption
100% Separation (Entire Combined System)	\$1,047 million			0	0 MG & 0 miles	0/0 MGD	No Certainty of Completion / High Disruption

	Capital Cost Ranking Best to Worst	Water Quality Ranking Best to Worst	Quality of Life Ranking Best to Worst	Schedule Ranking Best to Worst
Refinement Option No. 1 (27% Separation)	1	1	4	1
Refinement Option No. 2 (40% Separation)	2	2	3	2
Refinement Option No. 3 (50% Separation)	3	3	2	3
Refinement Option No. 4 (80% Separation)	5	4	1	4
0% Separation (100% Tunnel / Treatment)	1	0	5	0
100% Separation (Entire Combined System)	5	5	0	5

Stormwater Management Improvements

	Capital Cost (w/o Land)	Capital Cost (with HDR Land Costs)
Refinement Option No. 1 (27% Separation)	\$140 million	\$192 million
Refinement Option No. 2 (40% Separation)	\$208 million	\$284 million
Refinement Option No. 3 (50% Separation)	\$260 million	\$255 million
Refinement Option No. 4 (80% Separation)	\$416 million	\$568 million
100% Separation (100% Tunnel / Treatment)	\$520 million	\$710 million